

COLLOIDS AND SURFACES B: BIOINTERFACES

VOL. 14 NO. 1-4

AUGUST 1999

CONTENTS

(Abstracted/indexed in: Chemical Abstracts; Current Contents; Physical, Chemical & Earth Sciences; INSPEC; PASCAL/CNRS; MEDLINE)

Special Issue: 50 Years DLVO Theory

Preface

Introduction

C.J. van Oss, W. Norde and H. Visser	1
<i>1. Stability of particle suspensions</i>	
The role played by hydration forces in the stability of protein-coated particles: non-classical DLVO behaviour J.A. Molina-Bolivar, F. Galisteo-González and R. Hidalgo-Alvarez (Granada, Spain)	3
Application of an extended DLVO theory for the calculation of the interactions between emulsified oil droplets in alcohol solutions A. Wiacek and E. Chibowski (Lublin, Poland)	19
Interaction and aggregation of lipid vesicles (DLVO theory versus modified DLVO theory) S. Ohki (Buffalo, NY, USA) and H. Ohshima (Tokyo, Japan)	27
Stability versus flocculation of particle suspensions in water—correlation with the extended DLVO approach for aqueous systems, compared with classical DLVO theory W. Wu, R.F. Giese and C.J. van Oss (Buffalo, NY, USA)	47
Application of the extended DLVO theory—the stability of alatrofloxacin mesylate solutions W. Wu and G.H. Nancollas (Buffalo, NY, USA)	57
<i>2. Specific and aspecific protein interaction; protein adsorption</i>	
The electrostatic interaction between a charged sphere and an oppositely charged planar surface and its application to protein adsorption B. Jönsson (Lund, Sweden) and J. Ståhlberg (Södertälje, Sweden)	67
On protein-lipid membrane interactions J.J. Ramsden (Basel, Switzerland)	77
Forces controlling protein interactions: theory and experiment D. Leckband and S. Sivasankar (Urbana, IL, USA)	83
Influence of macroscopic and microscopic interactions on kinetic rate constants: I. Role of the extended DLVO theory in determining the kinetic adsorption constant of proteins in aqueous media, using von Smoluchowski's approach C.J. van Oss, A. Docoslis, W. Wu and R.F. Giese (Buffalo, NY, USA)	99

(Contents continued on page 259)

CONTENTS
direct

This journal is part of **ContentsDirect**, the *free* alerting service which sends tables of contents by e-mail for Elsevier Science books and journals. You can register for **ContentsDirect** online at: www.elsevier.nl/locate/contentsdirect



0927-7765(199908)14:1:4;1-0

(Contents continued from outside back cover)

3. Adhesion of bacteria and other particles and cells

The DLVO theory in microbial adhesion	
M. Hermansson (Göteborg, Sweden)	105
Surface physicochemical properties of <i>Pseudomonas fluorescens</i> and impact on adhesion and transport through porous media	
B.F. Smets, D. Grasso, M.A. Engwall and B.J. Machinist (Storrs, CT USA)	121
Exopolymers in bacterial adhesion: interpretation in terms of DLVO and XDLVO theories	
J. Azeredo, J. Visser and R. Oliveira (Braga, Portugal)	141
Calculation of van der Waals interactions involving lipid vesicles	
D.J. Mitev, L.S. Grigorov and C.S. Vassilieff (Sofia, Bulgaria)	149
Adsorption behavior of phospholipid vesicles at oil/water interfaces	
B. Yang, H. Matsumura and K. Furusawa (Ibaraki, Japan)	161
Role of acid-base interactions on the adhesion of oral streptococci and actinomyces to hexadecane and chloroform—influence of divalent cations and comparison between free energies of partitioning and free energies obtained by extended DLVO analysis	
R. Bos and H.J. Busscher (Groningen, The Netherlands)	169
DLVO and steric contributions to bacterial deposition in media of different ionic strengths	
H.H.M. Rijnaarts (Apeldoorn, The Netherlands), W. Norde, J. Lyklema (Wageningen, The Netherlands) and A.J.B. Zehnder (Dübendorf, Switzerland)	179

4. Interactions of poly(ethylene glycol)

Polymer coatings for improved protein crystal growth	
J.M. Van Alstine, M. Malmsten (Stockholm, Sweden), M.M. Long, V. King Johnson and L.J. DeLucas (Birmingham, AL, USA)	197
Use of poly(ethylene glycol) to control cell aggregation and fusion	
S.W. Hui (Buffalo, NY, USA), T.L. Kuhl (Santa Barbara, CA, USA), Y.Q. Guo (Buffalo, NY, USA) and J. Israelachvili (Santa Barbara, CA, USA)	213

5. Other related subjects

A thin film analog of the corneal mucus layer of the tear film: an enigmatic long range non-classical DLVO interaction in the breakup of thin polymer films	
A. Sharma (Kanpur, India), R. Khanna and G. Reiter (Mulhouse, France)	223
Surface properties of plasma membrane vesicles isolated from melon (<i>Cucumis melo</i> L.) root cells differing in salinity tolerance	
U. Yermiyahu (Bet Dagan, Israel), S. Nir (Rehovot, Israel), G. Ben-Hayyim (Bet Dagan, Israel), U. Kafkafi (Rehovot, Israel), G.F.E. Scherer (Hannover, Germany) and T.B. Kinraide (Beaver, WV, USA)	237
Calendar	251
Author Index	253
Subject Index	255
Volume Contents	257



